

Appl. No.: 10/782,570
Amdt. Dated May 12, 2006
Reply to Office action of February 14, 2006

Amendments to the Specification:

Please replace the following paragraph beginning on page 3, lines 29-31 and continuing through page 4, lines 1-11 with the following replacement paragraph:

Figures 1A-1E, B, and C show an alignment of AXMI-007 (SEQ ID NO:2) with cry1Aa (SEQ ID NO:5), cry1Ac (SEQ ID NO:6), cry1Ia (SEQ ID NO:7), cry3Aa1 (SEQ ID NO:8), cry3Ba (SEQ ID NO:9), cry4Aa (SEQ ID NO:10), cry6Aa (SEQ ID NO:11), cry7Aa (SEQ ID NO:12), cry8Aa (SEQ ID NO:13), cry10Aa (SEQ ID NO:14), cry16Aa (SEQ ID NO:15), cry19Ba (SEQ ID NO:16), and cry24Aa (SEQ ID NO:17). Toxins having C-terminal non-toxic domains were artificially truncated as shown. ~~The alignment shows the most highly conserved amino acid residues highlighted in black, and highly conserved amino acid residues highlighted in gray.~~
Conserved group 1 is found from about amino acid residue 217 to about 238 of SEQ ID NO:2. Conserved group 2 is found from about amino acid residue 299 to about 347 of SEQ ID NO:2. Conserved group 3 is found from about amino acid residue 445 to about 590 of SEQ ID NO:2. Conserved group 4 is found from about amino acid residue 609 to about 619 of SEQ ID NO:2. Conserved group 5 is found from about amino acid residue 692 to about 702 of SEQ ID NO:2.

Please replace the following paragraph on page 13, lines 1-11 with the following replacement paragraph:

Amino acid substitutions may be made in nonconserved regions that retain function. In general, such substitutions would not be made for conserved amino acid residues, or for amino acid residues residing within a conserved motif, where such residues are essential for protein activity. Examples of residues that are conserved and that may be essential for protein activity include, for example, residues that are identical between all proteins contained in the alignment of Figures 1A-1E, B, and C. Examples of residues that are conserved but that may allow conservative amino acid substitutions and still retain activity include, for example, residues that have only conservative substitutions between all proteins contained in the alignment of Figures

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1A-1E, B, and C. However, one of skill in the art would understand that functional variants may have minor conserved or nonconserved alterations in the conserved residues.